



# **NUECES BBASC STUDY #3**

## **NUECES WATERSHED PRE- AND POST- DEVELOPMENT NUTRIENT BUDGETS**

**NUECES ESTUARY ADVISORY COUNCIL**

**JUNE 16, 2014**

**PAULA JO LEMONDS, PE, PG**

# **DISCUSSION**

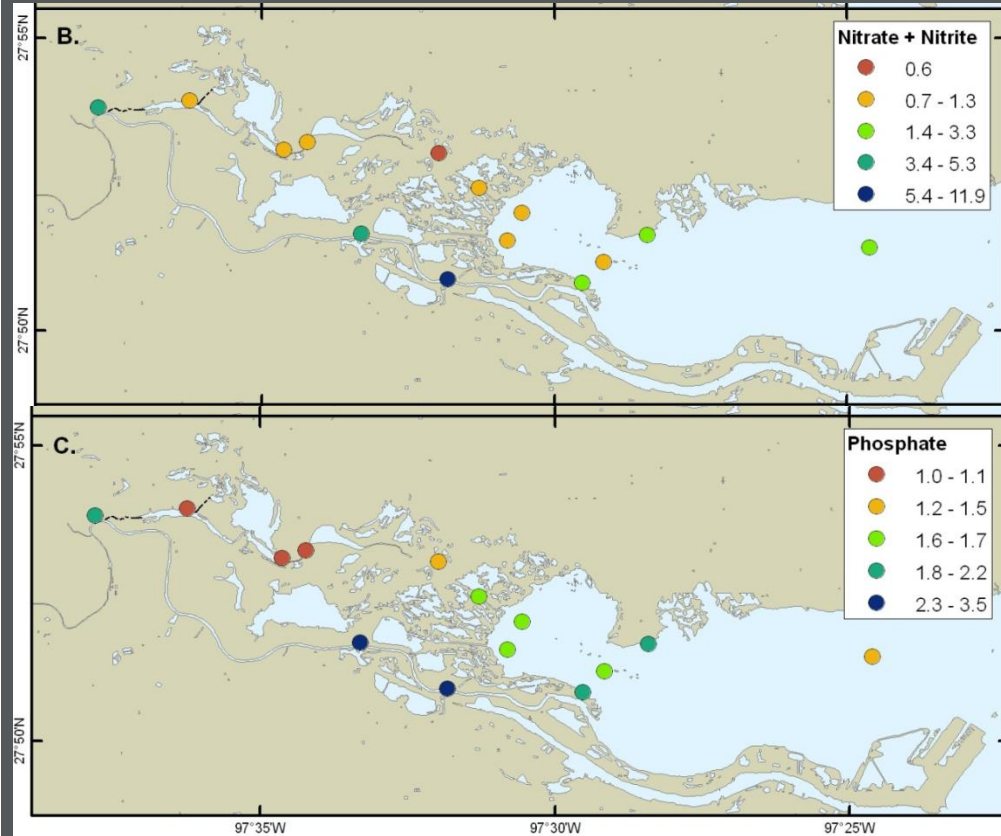
**Background**

**Scope of Work**

**Schedule**

# BACKGROUND

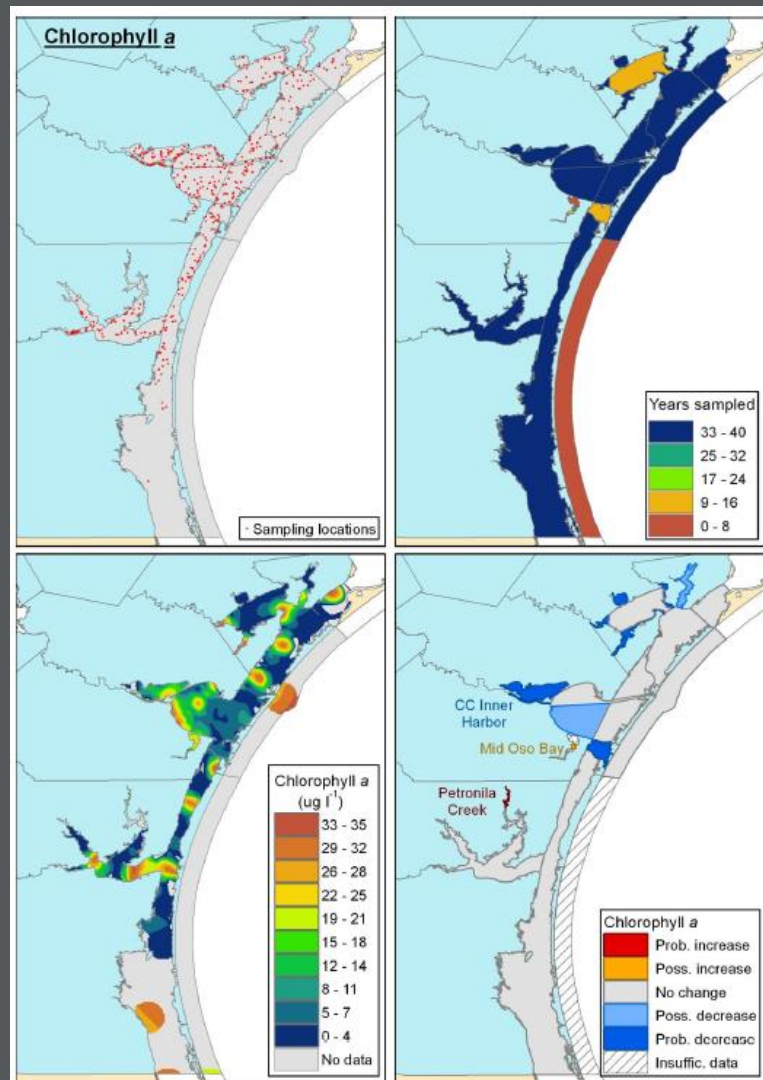
- Nueces BBASC work plan
  - Tier 2b Recommendation
- Nueces BBEST
  - BBEST Recommendations Report
    - Sec. 5.2 Nutrient Considerations
- Nueces BBASC
  - BBASC Recommendations Report
    - Sec. 4.3.2 Nutrient Considerations



Source: BBEST Recommendations Report

# BACKGROUND FROM BBASC WORK PLAN

4



# GOALS

- Develop nutrient budgets based on quantitative understanding of natural supply of all nutrient forms and anthropogenic changes in these supplies over time for Nueces Bay watershed
- Determine annual loads for both the pre-development and present condition

Source: Nueces BBASC work plan



# SOW

- Task 1 – Compile Data
  - Compile Water Quality and Hydrologic Data
    - Long-term (1934 – 2014)
    - Short-term (1986 – 2014)
    - Recent (2004 – 2014)
- Task 2 – Perform Data Evaluation and Modeling Analyses
  - Perform Data Evaluation
    - Available data, sampling stations, and subwatersheds
    - Identify appropriate stations



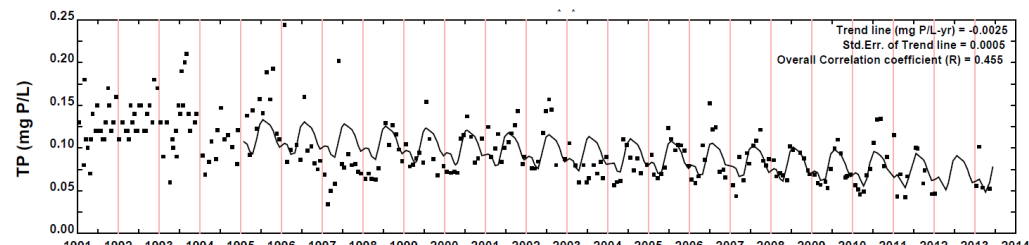
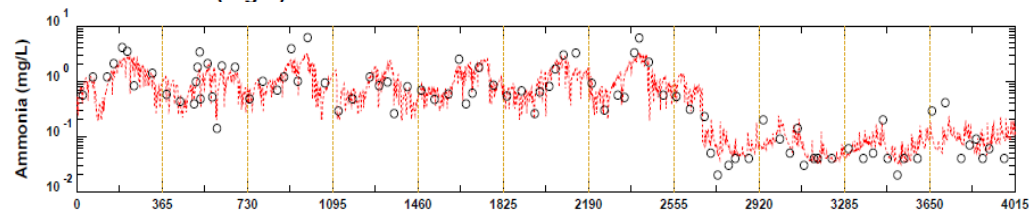
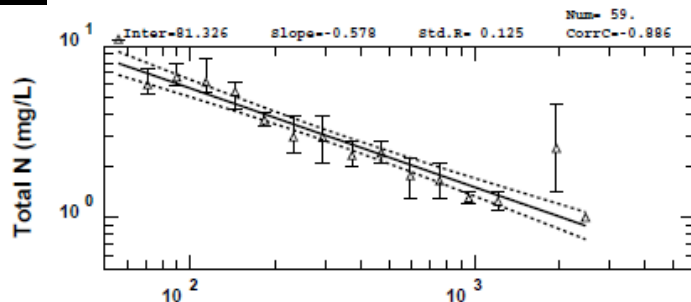
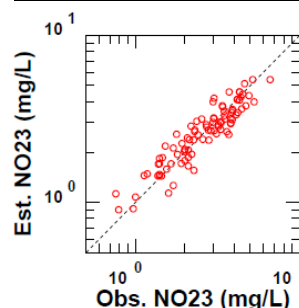


# SOW

- Task 2 – Perform Data Evaluation and Modeling Analyses (*continued*)
  - Linear Regression Analyses
  - USGS LOADEST
  - Estimate Reservoir Influence Sink/Sources
  - Water Quality Correlations to Anthropogenic Changes
  - Pre- and Post-Development Loadings
- Task 3 – Meetings and Report
  - Kickoff Meeting (today)
  - Up to 2 more meetings to present results
  - Draft and Final Report



## LOAD ESTIMATOR (LOADEST): A FORTRAN PROGRAM FOR ESTIMATING CONSTITUENT LOADS IN STREAMS AND RIVERS





# SCHEDULE

- Waiting on Contract / NTP
- Anticipate 40 weeks to complete analysis
- Draft report after analysis
- Final report due August 2015



